Grades 11 - 12

Diploma Programme

Curriculum Guide

Bonn International School

DIPLOMA YEARS

CURRICULUM HANDBOOK

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Programme Information

As an international school, BIS offers a comprehensive and balanced curriculum, preparing young individuals to relate classroom experience to the realities of the outside world and inspiring them to achieve their personal best. Starting in Grade 11, students at BIS are given the opportunity to study for the full International Baccalaureate (IB) Diploma, a selection of IB subject Courses along with their BIS High School Diploma.

Whether studying for the IB Diploma, IB Courses or BIS High School Diploma, Grade 11 and 12 students participate in a challenging and comprehensive education that provides them with skills and attitudes to be successful in their tertiary education and beyond.

IB Diploma

The curriculum is made up of the IB Diploma Programme core elements and six subject groups. The DP core elements aim to broaden students' educational experience and challenge them to apply their knowledge and skills.

The three core elements are:

- CAS (Creativity, Activity, Service), in which students complete projects related to those three concepts.
- Theory of Knowledge, in which students reflect on the nature of knowledge and on how we know what we claim to know.
- Extended Essay, which is an independent, self-directed piece of research, finishing with a 4,000-word paper.

DP Students choose courses from the following subject groups: Studies in Language and Literature, Language Acquisition, Individuals and Societies, Sciences, Mathematics and the Arts. Students may opt to take additional course work in Sciences, Individuals and Societies, or a language course, instead of a course in the Arts.

Students will take some subjects at higher level (HL) and some at standard level (SL). For a full IB Diploma to be awarded three subjects must be at HL and three at SL. HL and SL courses differ in scope but are measured according to the same grade descriptors, with students expected to demonstrate a greater body of knowledge, understanding and skills at a higher level. Standard level subjects take up 150 teaching hours. Higher level comprises 240 teaching hours.

Each student's performance is measured against well-defined levels of achievement consistent from one examination session to the next. Responsibility for all academic judgements about the quality of candidates' work rests with external examiners world-wide, led by principal and chief examiners with international authority. The grading system used by the International Baccalaureate Organization is criterion referenced. Top grades are not simply awarded "on a curve" to a certain percentage of candidates but rather reflect attainment of knowledge and skills relative to set standards equally applied to all schools throughout the world.

A variety of assessment methods are used to value both the content and the process of academic achievement and to take into account different learning styles and cultural patterns. Examination techniques are chosen from a range of options: oral and written, long and short responses, data-based questions, essays, and multiple-choice questions. These are complemented by the internal assessment of coursework by the teachers responsible for evaluating progress over a two-year period. With classroom teachers and international examiners working in partnership, the emphasis is on ensuring that students have ample opportunity to demonstrate their knowledge.

Details of the specific assessment requirements for each course can be found under the subject headings.

IB Courses

Some of our students choose to study and earn a certificate from a selection of IB individual subject courses instead of pursuing the full IB Diploma. These students have a clear educational path in mind and want the freedom of course choice to specialize in a specific area of study.

Students following the IB Courses study pathway have more flexibility about the combination of subjects and levels they choose to study. These students participate in the same classes as

the students completing the IB Diploma. IB Course students may but are not required to study Theory of Knowledge, or to complete the Extended Essay. It is important to note, however, that all Grade 11 and 12 students must fulfill CAS requirements.

IB course students will be awarded grades based on internal assessments and external examinations in subjects taken. In each subject studied, points are awarded on a 1 to 7 scale following IB criteria.

BIS High School Diploma

Some students may choose to complete their secondary education through earning credits for the BIS High School Diploma. BIS awards a High School Diploma to all students who successfully complete and meet the graduating requirements from Grades 9 to 12, The BIS Diploma is taught through the courses offered in the IB Programme as per the respective curricula. One credit is earned for a minimum of one year's academic study. All BIS students automatically gain credits towards the BIS High School Diploma and their achievements are celebrated during a graduation ceremony that takes place each June.

The Diploma Programme Core

Creativity, Activity, Service (CAS)

CAS is at the heart of the Diploma Programme. With its holistic approach, CAS is designed to strengthen and extend students' personal and interpersonal learning from the PYP and MYP. CAS is organized around the three strands of creativity, activity and service defined as follows.

• Creativity—exploring and extending ideas leading to an original or interpretive product or performance.
• Activity—physical exertion contributing to a healthy lifestyle
• Service—collaborative and reciprocal engagement with the community in response to an authentic need.

Students develop skills, attitudes and dispositions through a variety of individual and group experiences that provide students with opportunities to explore their interests and express their passions, personalities and perspectives.

CAS complements a challenging academic programme in a holistic way, providing opportunities for self-determination, collaboration, accomplishment and enjoyment.

Content:	**Assessment:**
Students propose CAS experiences addressing the three strands of CAS. The experiences chosen must be **outside** the Diploma curriculum in order to be considered for CAS. Although experiences may take place outside the DP curriculum, successful completion of CAS is a requirement of the Diploma programme. Students are required to propose CAS experiences in their CAS worksheets on ManageBac, indicating their personal goals and contact details of the experience supervisor. For each experience approved by the CAS coordinator, students write regular reflections both during and at the end of each project,	CAS requires students to achieve the following seven learning outcomes during Grades 11 and 12 of the Diploma programme: 1. Identify individual strengths and develop areas for growth. 2. Demonstrate that challenges have been undertaken, developing new skills in the process. 3. Demonstrate how to initiate and plan a CAS experience. 4. Show commitment and perseverance in CAS experiences. 5. Demonstrate the skills and recognize the benefits of working collaboratively.

indicating which outcomes have been achieved. On completion of the experience, supervisors review the student's performance and reflections and decide whether the outcomes chosen by the student have been achieved or not. At the end of Grades 11 and 12, students complete a reflection on their CAS journey.	6. Demonstrate engagement with issues of global significance. 7. Recognise and consider the ethics of choices and actions.

Extended Essay

The extended essay at a glance

All students registered for a full IB diploma must write an Extended Essay. The extended essay is an in-depth study of a focused topic chosen from the list of available Diploma Programme subjects for the session in question. This is normally one of the student's six chosen subjects for those taking the IB diploma, or a subject that a student has a background in. It is intended to promote academic research and writing skills, providing students with an opportunity to engage in personal research in a topic of their own choice, under the guidance of a supervisor (**an appropriately qualified member of staff within the school**). This leads to a major piece of formally presented, structured writing, in which ideas and findings are communicated in a reasoned and coherent manner, appropriate to the subject chosen. It is mandatory that all students undertake three reflection sessions with their supervisor, which includes a short, concluding interview, or *viva voce*, with their supervisor following the completion of the extended essay. The extended essay is assessed against common criteria, interpreted in ways appropriate to each subject.

Key Features:

- The extended essay is compulsory for all students taking the Diploma Programme and is an option for course students.
- A student must achieve a D grade or higher to be awarded the Diploma.
- The extended essay is externally assessed and, in combination with the grade for theory of knowledge, contributes up to three points to the total score for the IB Diploma.
- The extended essay process helps prepare students for success at university and in other pathways beyond the Diploma Programme.
- The extended essay is a piece of independent research on a topic chosen by the student in consultation with a supervisor in the school.
- It is presented as a formal piece of sustained academic writing containing no more than 4,000 words accompanied by a reflection form of no more than 500 words.

Assessment:

The Extended Essay is marked against 5 criteria which are listed below:

	Marks
Criterion A: Focus and Method	6
Criterion B: Knowledge and Understanding	6
Criterion C: Critical Thinking	12
Criterion D: Presentation	4
Criterion E: Engagement	6
Total	34

• It is the result of approximately 40 hours of work by the student. • Students are supported by a supervision process recommended to be 3–5 hours, which includes three mandatory reflection sessions. • The third and final mandatory reflection session is the *viva voce*, which is a concluding interview with the supervising teacher.	

Theory of Knowledge

Theory of Knowledge (TOK) is a course about critical thinking and inquiring into the creation and acquisition of knowledge. Students reflect on the knowledge, beliefs and opinions that they have built up from their years of academic studies and their lives outside of the classroom. It is a core element that all Diploma Programme students undertake and to which all schools are required to devote at least 100 hours of class time.

Content:	**Assessment:**
Core Theme Knowledge and the Knower Optional themes (two) ● Knowledge and technology ● Knowledge and language ● Knowledge and politics ● Knowledge and religion ● Knowledge and indigenous societies Areas of Knowledge ● History ● Human Sciences ● Mathematics ● The Arts ● Natural Sciences The Knowledge Framework: For each of the Themes and Areas of Knowledge below, students will work through: ● Scope ● Perspectives ● Methodology ● Ethics	**The Exhibition: 33%** The student will create an Exhibition showing how TOK manifest in the world around us. Students will pick three real world objects and discuss how these selected pieces answer a question about the nature of knowledge. Students may explore concepts such as power, perspective, culture, justification, values, truth, certainty, objectivity, explanation, interpretation, evidence, and responsibility. **Essay: 67%** The student will write a 1600 word essay from 1 of 6 prescribed titles using the Knowledge Framework, Areas of Knowledge and TOK concepts.

Group 1: Studies in Language and Literature

Course Name: Literature/Self-taught Literature/Language and Literature
Grade 11 & Grade 12

Language A:

Literature/Self-taught Literature courses provide an opportunity for students to continue to develop oral and written skills of literary analysis in their mother tongue. The courses are built on the assumption that literature is concerned with our conceptions, interpretations and experiences of the world. The study of literature can therefore be seen as an exploration of the way it represents the complex pursuits, anxieties, joys and fears to which human beings are exposed in daily life. Self-taught students do this only at standard level.

Language and Literature courses aim to develop students' textual analysis skills and the understanding that texts – both literary and non-literary – can be seen as autonomous yet simultaneously related to culturally determined reading practices. An understanding of the ways in which formal elements are used to create meaning in a text is combined with an exploration of how that meaning is affected by reading practices that are culturally defined and by the circumstances of production and reception. There is no Self-taught option for this course.

SL Assessment	HL Assessment
External assessment (3 hours) 70%	**External assessment (4 hours) 80%**
Paper 1: Guided textual analysis 35% **(1 hour 15 minutes)**	**Paper 1: Guided textual analysis 35%** **(2 hours 15 minutes)**
Literature/Self-taught: The paper consists of two passages, from two different literary forms, each accompanied by a question. Students choose one passage and write an analysis of it.	**Literature:** The paper consists of two literary passages, from two different literary forms, each accompanied by a question. Students write an analysis of each of the passages.
Language and Literature: The paper consists of two non-literary passages, from two different text types, each accompanied by a question. Students choose one passage and write an analysis of it.	**Language and Literature:** The paper consists of two non-literary passages, from two different text types, each accompanied by a question. Students write an analysis of each of the passages.
Paper 2: Comparative essay 35% **(1 hour 45 minutes)**	**Paper 2: Comparative essay 25%** **(1 hour 45 minutes)**

The paper consists of four general questions. In response to one question students write a comparative essay based on two works studied in the course. **Internal assessment 30%** **Individual oral (15 minutes)** **Literature/Self-taught:** Supported by two extracts from two literary works, students will offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher, to the following prompt: *Examine the ways in which the global issue of your choice is presented through the content and form of two of the texts that you have studied*. Self-taught students offer a prepared response of 15 minutes without questions. **Language and Literature:** Supported by an extract from one non-literary text and one from a literary work, students will offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher, to the following prompt: *Examine the ways in which the global issue of your choice is presented through the content and form of two of the texts that you have studied*.	The paper consists of four general questions. In response to one question students write a comparative essay based on two works studied in the course. **HL essay 20%** **Literature:** Students submit an essay on one literary text or work studied during the course. The essay must be 1,200-1,500 words in length. **Language and Literature:** Students submit an essay on one non-literary text or a collection of non-literary texts by one same author, or a literary text or work studied during the course. The essay must be 1,200-1,500 words in length. **Internal assessment: 20%** **Individual oral (15 minutes)** **Literature:** Supported by two extracts from two literary works, students will offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher, to the following prompt: *Examine the ways in which the global issue of your choice is presented through the content and form of two of the texts that you have studied*. **Language and Literature:** Supported by an extract from one non-literary text and one literary work, students will offer a prepared response of 10 minutes, followed by 5 minutes of questions by the teacher, to the following prompt: *Examine the ways in which the global issue of your choice is presented through the content and form of two of the texts that you have studied*.

Group 2: Language Acquisition

Course Name: English B (HL Only)/ German B (SL and HL)	
In order to fulfill the requirements for the IB Diploma, all students must study either a Group 2 subject or a second Group 1 subject. A **Language Acquisition course** is an additional language course designed for students with some previous experience of learning the language in question. It can be studied at either Standard Level or Higher Level. The main focus of the course is on the development of language skills. These language skills will be developed through the study and use of a range of written and spoken material, which will extend from everyday oral exchanges to literary texts and be related to the cultures concerned. Language Acquisition courses are available in German and English. German B will meet the needs of those students who have been studying German for a number of years. English B is for non-native English speakers who are able to study their own mother tongue Language A in Group 1. Five prescribed themes provide relevant context for study and opportunities for students to communicate about matters of personal, local, national and global interest.	
Content:	**Assessment:**

Identities ● Lifestyle ● Health and wellbeing ● Beliefs and values ● Subcultures ● Language and identity **Experiences** ● Leisure activities ● Holidays and travel ● Life stories ● Customs and traditions ● Migration **Human Ingenuity** ● Entertainment ● Artistic expressions ● Communication and media ● Technology ● Scientific innovation **Social Organization** ● Social relationships ● Community ● Social engagement ● The working world ● Law and order **Sharing The Planet** ● The environment ● Human rights ● Peace and conflict ● Globalization ● Ethics ● Urban and rural environment **Literature (HL only):** Two literary works SL and HL are differentiated by the number of teaching hours, the depth of syllabus coverage, the study of literature at HL, and the level of difficulty and demands of assessment and assessment criteria. Students are exposed to a variety of texts in the target language, from written, audio and video sources. They will increase	Students are assessed in terms of both productive and receptive skills, as well as in their ability to interact with others in the target language. **External Assessment** **Written component: 75%** ○ **Paper 1: Productive skills:** 25% ■ *Writing task* ○ **Paper 2: Receptive skills:** 50% ■ *Listening comprehension* ■ *Reading comprehension* **Internal Assessment** **Individual Oral:** 25% ○ *Interactive skills* **SL:** Conversation with the teacher, based on a visual stimulus, followed by a discussion based on one of the themes from the syllabus. **HL:** A conversation with the teacher based on an extract from one of the literary works studied in class, followed by a discussion based on one or more of the themes from the syllabus.

significantly their knowledge and awareness of grammar, vocabulary and styles, enabling them to produce a wide range of texts and deal with a variety of situations.	

Course Name: German/Spanish *ab initio*

The *ab initio* courses are designed for beginners with no previous experience of the language in question. The main focus of the course is the acquisition of language that will enable the students to respond and interact appropriately in a defined range of everyday situations. The combination of language, texts and themes (see below) provides the basis of the course and aims to foster the students' intercultural understanding.

Content:	Assessment:
Identities ● Personal attributes ● Personal relationships ● Eating and drinking ● Physical well-being **Experiences** ● Daily routine ● Leisure ● Holidays ● Festivals and celebrations **Human Ingenuity** ● Transport ● Entertainment ● Media ● Technology **Social Organization** ● Neighbourhood ● Education ● The workplace ● Social issues **Sharing The Planet** ● Climate ● Physical geography ● The environment ● Global issues Students are exposed to a variety texts in the target language, drawn from written and audio sources. Students learn the grammar, vocabulary and awareness of styles that will enable them to produce a range of texts and deal with a variety	Students are assessed in terms of both productive and receptive skills, as well as in their ability to interact with others in the target language. **External Assessment (75%)** ● **Paper 1: Productive Skills:** 25% SL: 60 minutes ○ *2 written tasks* ● **Paper 2: Receptive Skills:** 50% SL: 105 minutes, ○ *Listening comprehension (45 minutes)* ○ *Reading comprehension (60 minutes)* **Internal Assessment (25%)** ● **Individual Oral:** 25% SL 7-10 minutes ○ *Interactive skills* ○ Conversation with the teacher, based on a visual stimulus, followed by a discussion based on one of the themes from the syllabus.

of situations.	

Group 3: Individuals and Society

Course Name: Economics (Class of 2022 and beyond)

Economics is a social science. It studies human and societal phenomena through application of mathematical models and theories. Studying economics will be an asset for those who wish to pursue a career in other social sciences such as Law and Politics or areas like Business and Management.

The fundamental economic problem is that we are faced with scarcity, the idea that we live in a world with finite resources that are not able to satisfy our endless needs and wants. In order to deal with this, society is faced with choices, trying to allocate our resources in order to achieve and establish economic goals and well-being. By taking Economics, students will learn theories, concepts and models that allow them to analyze and evaluate the consequences of the choices made by individuals, firms and governments. The IB Diploma Economics course at BIS will not only approach these questions from an academic point of view, but as contemporary real world issues. A new syllabus introduced for the 2020-2021 academic year will emphasize key concepts such as scarcity, sustainability, choice, economic well-being, change, interdependence, intervention, equity and efficiency. Additionally, students will need to apply economic theory to real world situations, thus it is recommended that students pay attention to real world events and think about the connections between what they have learned and what is happening in our world.

Having followed the IB Diploma Economics Programme at Higher or Standard Level, students will be expected to do the following:

1. Demonstrate knowledge and understanding of specified content
2. Demonstrate application and analysis of knowledge and understanding
3. Demonstrate synthesis and evaluation
4. Select, use and apply a variety of appropriate skills and techniques

Content:	**Assessment:**
Core: ● Section 1: Introduction to Economics ● Section 2: Microeconomics ● Section 3: Macroeconomics ● Section 4: The Global Economy NOTE: HL students cover the same core topics as SL students, and, in addition, study extensions such	**Written Examinations** HL 80%, SL 70% **Paper 1: HL - 20%, SL - 30%** An extended response which covers all sections of the syllabus. HL extension material is included for HL students only **Paper 2: HL - 30%, SL - 40%**

as Market Power which add depth to their knowledge.	A data response question which covers all sections of the syllabus and includes some quantitative questions. HL extension material is included for HL students only **Paper 3: HL Extension HL - 30%** A policy paper which covers all sections of the syllabus including HL extension material. Includes both qualitative and quantitative questions **Internal Assessment** HL - 20%, SL - 30% Portfolio of economic commentaries: The internal assessment consists of a portfolio of 3 economic commentaries on economic newspaper articles. They are to be completed over the 2-year duration of the course. Students are encouraged to read the newspaper regularly to make strong connections between the course and the real world. Connections to key concepts are required.

Course Name: Geography

The study of Geography at IB Diploma level involves contemporary issues such as urbanization, population and development. The pressures human activities are placing on the environment and environmental hazards threatening humans are increasingly emphasized. Indeed, a central core of the course is the interaction between humans and the physical world.

The vast majority of BIS students have traveled more than the average young person. They should have a well-developed appreciation of distance, area and scale. Through personal experience, students will have knowledge of different cultures, climates and political systems. Such knowledge and experience helps create a foundation for the study of IB Diploma Geography.

Geography is "at the interface" between the Sciences and the Humanities. It examines how people live and interact with the environment. It fosters international understanding and a respect for different cultures. The Geography course involves producing a large project that requires research work being done outside school. At both Higher Level and Standard Level this practical work is demanding and requires enthusiasm and dedication.

Content:	**Assessment:**
Higher and Standard Level Main Geographical Skills ● Undertaking research (both within and outside school) ● Producing essays, reports and projects ● Answering resource based, structured questions <u>Paper 1 - Optional Themes</u> ● Freshwater environments ● Oceans and coastal margins ● Extreme environments ● Geophysical Hazards ● Leisure, tourism and sport ● Food and health ● Urban environments <u>Paper 2</u>	**Paper 1: HL - 35%, SL - 35%** - Options Paper - Three question on optional themes for HL - Two questions on optional themes for SL - Each question has 10 marks which should be answered, choose 1 of 2 essay questions to answer - 20 marks for each question **Paper 2: HL - 25%, SL - 40%** - Section A: Students answer all short-answer questions. Some include data. (30 marks) - Section B: Students should answer the short questions based on an infographic. (10 marks) - Section C: Students answer one extended response question. (10 marks) - 50 marks in total

● Changing Populations ● Global Climate - Vulnerability and Resilience ● Global Resource Consumption and Security <u>Paper 3 - HL Core Extension</u> ● Power, Places and Networks ● Human Development and Diversity ● Global Risks and Resilience	**Paper 3: HL - 20%** - Students answer one of three essay questions. (28 marks) **Internal Assessment: HL - 20%, SL - 25%** - Written report based on fieldwork. Maximum 2,500 words - Based on any part of the syllabus

Course Name: History

History is concerned with individuals and societies in the widest possible context – political, social, economic, religious, technological and cultural. It is concerned with trends and developments, continuity and change.

Picking up from where we left off in Grade 10, the content of the IB Diploma course at BIS has been selected to enable the students to gain an understanding of the key happenings, trends and developments of the 20th century world. By making use of diverse sources, methods and interpretations, we hope that they will additionally gain an appreciation of, and a lasting interest in, history.

Students, who study history in Grades 11 and 12, will learn how to offer a rational argument, make critical judgements, and write clearly. In other words: write a good essay, detect bias and omissions, and be able to appreciate more than one side to any question. The historian's skills of research, interpretation and communication are highly valued by employers, making history a course of study valuable to all.

Content:	Assessment:
Document Analysis ● The move towards Global War- Japan, Italy and Germany (1919-1939) **Causes, Practices & Effects of War** ● World War I, Spanish Civil War, Origins of World War II, Chinese Civil War. ● Authoritarian rulers- Stalin, Hitler, Mussolini, Mao **Higher-Level Only:** ● Europe and the First World War 1870-1914 ● Inter-War Years: Conflict and Cooperation 1918-1936 ● Versailles to Berlin: Diplomacy 1919-45 ● Soviet Union 1924-1953	**Written Examinations** **Paper 1: HL (20%) SL (30%)** Themes - The move towards global war (Document analysis) **Paper 2: HL (25%) SL (45%)** World History (Written exam- two essay) **Paper 3: HL (35%)** European Regional Option (Written exam- three essay) **Internal Assessment** HL (20%) SL (25%) 2200 words study of a historical topic of the student's choice.

Group 4: Sciences

[The *Collaborative sciences project* brings together students from all Science subjects for a joint research project.]

Course Name: **Biology**

Biology is one of the fastest developing Sciences. New techniques are being developed and discoveries made daily, especially in molecular biology and biotechnology. This rapid innovation provides much food for discussion of ethical appropriateness - just because we can, is it right? The DP course delves into these dynamic aspects of Biology, as well as providing insights into ecology, evolution and human physiology.

Many of the skills acquired and used in DP Biology are shared between the 4 Sciences (Physics; Sports, Exercise & Health Science; Chemistry) as well as subjects like Mathematics, History and Geography.

This course contains an element of statistical data analysis. A good level of expression in English is required as essay writing is part of assessment. Higher Level Biology, in particular, is a demanding course at the same standard as other Higher Level Science courses, requiring much detailed recall, also of complex biochemical processes.

Each student carries out practical lab work within the group, but is also required to plan, carry out and write up an "individual investigation" as part of the assessment, which otherwise consists of tests, quizzes and exams.

The aim of the updated syllabus is to integrate concepts, topic content and the nature of science through inquiry. Students and teachers are encouraged to personalize their approach to the syllabus to best fit their interests.

Content:	**Assessment:**
Core ● Cell biology ● Molecular biology ● Genetics ● Ecology ● Evolution and biodiversity ● Human physiology Higher Level Extensions ● Nucleic acids ● Metabolism, cell respiration and photosynthesis ● Plant biology ● Genetics and evolution ● Animal physiology Options	Written Examination Paper 1 - SL and HL 36% P1A: Multiple choice; P1B: Data-based questions, calculator allowed for both sections 45 minutes SL, 60 minutes HL Paper 2 - SL 40% HL 36% Consists of short answer and extended response questions on core material. 75 minutes SL, 135 minutes HL Paper 3 – SL 20% HL 24% Section A Consists of one data-based question and several short

ONE of the following will be studied: ● Neurobiology and behaviour ● Biotechnology and bioinformatics ● Ecology and conservation ● Human physiology	answer questions on experimental work. Section B Consists of short answer questions from one option. Internal Assessment – 20% This consists of a short scientific investigation (6 to 12 pages) which focuses on a particular area of biology. It is graded internally against 5 criteria and moderated externally by the IBO.

Course Name: **Chemistry (2024)**

Chemistry is the central science. Chemical principles underpin the physical environment and all biological systems. So the study of Chemistry is important in its own right, and also for the understanding of other science subjects. It is a subject where theory and practical work support each other. It is also a subject that depends on language as much as mathematical skill and to be successful in this subject you will need to be able to express yourself well in written English as well as be able to handle calculations.

Chemistry provides a valuable training in lateral thinking. The answer to any question in Chemistry can rarely be found from knowledge of one particular topic. Answers are composed by pulling together information and skills from many different sources. Training in this type of thinking, whatever the content, is very useful groundwork for many subsequent careers.

Content:	**Assessment:**
Units ● Stoichiometric relationships ● Atomic structure ● Periodicity ● Chemical Bonding and Structure ● Energetics/Thermochemistry ● Chemical Kinetics ● Equilibrium ● Acids & Bases ● Oxidation & Reduction ● Organic Chemistry ● Analytical Chemistry *All units except for 'Stoichiometric Relationships' have an additional higher level extension.	Written Examination Paper 1 - SL 20% HL 20% Multiple choice, no calculator. 45 minutes SL, 60 minutes HL Paper 2 - SL 40% HL 36% Consists of short answer and extended response questions on core material. 75 minutes SL, 135 minutes HL Paper 3 – SL 20% HL 24% Section A Consists of one data-based question and several short answer questions on experimental work. Section B Consists of short answer and extended response

	questions from one option. 60 minutes SL, 75 minutes HL Internal Assessment – 20% This consists of a short scientific investigation (6 to 12 pages) which focuses on a particular area of chemistry. It is graded internally against 5 criteria and externally moderated by the IB.

Course Name: **Chemistry (2025)**

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Content:	**Assessment:**
Units ● Structure 1: Models of the particulate nature of matter ● Structure 2: Models of bonding and structure ● Structure 3: Classification of matter ● Reactivity 1: What drives chemical reactions? ● Reactivity 2: How much, how fast and how far? ● Reactivity 3: What are the mechanisms of chemical change? *All units have an additional higher level extension.	Written Examination Paper 1 - SL & HL 36% Section 1A - Multiple choice Section 1B - Data Based Questions Both sections are completed simultaneously without interruption 90 minutes SL, 120 minutes HL Paper 2 - SL & HL 44% Consists of short answer and extended response questions on core material. 90 minutes SL, 150 minutes HL Internal Assessment – 20% This consists of a short scientific investigation (6 to 12 pages) which focuses on a particular area of chemistry. It is graded internally against 4 criteria and externally moderated by the IB.

Course Name: **Physics**	
In common with other Group 4 courses, in studying Physics, students are given the opportunity to develop scientific ability (knowledge of concepts, principles and phenomena) and skills (associated with both conceptual and experimental activity). Emphasis is also placed on increasing awareness and appreciation of the limitations of Physics, its impact on societies (past, present and future) and the responsibilities of practising physicists. During the course, students should become more aware of the way in which physicists work and communicate with each other. Students will come to know and understand more about the technological applications of Physics. Theory and experiments will be seen to complement one another and that experiment can be thought of as an interface between our complex, "dirty" real world and the "clean" conceptual models we use to describe it. The course provides a suitable preparation for higher education Physics and Physics-related courses and for professional courses which require students to have a justified knowledge of Physics when admitted. With its focus on analysis, evaluation and synthesis of information, the course also greatly helps to prepare for a wide range of other career paths in which knowledge of Physics, as such, is not essential.	
Content:	**Assessment:**

The new syllabus (first assessments May 2025) covers the following topics: ● Mechanics ● Thermal Physics & thermodynamics ● Current electricity and induction ● Waves, standing waves, SHM ● Fields ● Nuclear Physics Some aspects are taught to greater depth to HL students.	Written Examination Paper 1 - 36% Multiple choice and data based questions. Calculators allowed. 1.5 h SL, 2 h HL Paper 2 - 44% Consists of short answer and extended response questions. 1.5 h SL, 2.5 h HL Internal Assessment – 20% This consists of a short scientific investigation (max. 3000 words) which focuses on a particular area of physics. It is graded internally against 5 criteria and externally moderated by the IB.

Course Name: **Sports, Exercise and Health Science**
Within this emerging and exciting time in the sports and exercise health science arena, we have the opportunity to offer students a combination of sciences (Chemistry, biology and physics) and apply this within a sport, exercise and health context. Continuing on from Grade 9/10 Sports Science, this course incorporates the traditional disciplines of anatomy, exercise physiology, biomechanics, sports psychology and nutrition. Students will cover a range of core and option topics including sports psychology and physical activity and health. Students will also carry out practical (experimental) investigations in both laboratory and field settings within the topics they are studying. This will provide an opportunity to acquire the knowledge and understanding necessary to apply scientific principles and critically analyse human performance. The course will address issues of the international dimension and ethics by considering sport, exercise and health relative to the individual and global environment.

Although demanding this is an exciting and innovative course that allows students to develop their scientific understanding within the context of sport, exercise and health.	
Content:	**Assessment:**

Core **Standard Level (Compulsory)** ● Anatomy ● Exercise physiology ● Energy systems ● Movement analysis ● Skill in sport ● Measurement and evaluation of human performance **Higher Level Only (in addition)** ● Further anatomy ● The endocrine system ● Fatigue ● Friction and Drag ● Skill acquisition ● Genetics and athletic performance ● Exercise and immunity Options Students will cover the following options- ● Optimising physiological performance ● Physical activity and health	**Standard Level-** External Exam- Paper 1 (20%)- ● 30 multiple choice questions from all core topics Paper 2 (35%)- ● Section A- Data based question and compulsory short answer questions from core topics ● Section B- One extended response question from the core topics from a choice of 3 Paper 3 (25%)- ● Several short answer questions (all compulsory for each of the options studied. Internal Assessment (20%)- ● A 10 hour individual investigation **Higher Level-** External Exam- Paper 1 (20%)- ● 40 multichoice questions from all core topics Paper 2 (35%)- ● Section A- Data based question ● and compulsory short answer questions from core topics and HL topic questions ● Section B- Two extended response question from the core topics and HL topics from a choice of 4. Paper 3 (25%)- ● Several short answer questions and extended response questions (all compulsory for each of the options studied). Internal Assessment (20%)-

	• A 10 hour individual investigation

Group 5: Mathematics

Course Name: Mathematics: Analysis and Approaches SL	
This course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. The course includes topics that are both traditionally part of a pre-university mathematics course (for example, functions, trigonometry, calculus) as well as topics that are amenable to investigation, conjecture and proof, for instance the study of sequences and series. The course allows the use of technology, as fluency in relevant mathematical software and hand-held technology is important. However, Mathematics: analysis and approaches has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. Note: in addition to the examined course all students will follow an additional unit on vectors. This allows for full Diploma recognition by the German education authorities (Kultusministerkonferenz or KMK) so that students have full access to apply for courses at German universities.	
Content:	**Assessment:**
Core There are five topics and within these topics there are sub-topics. The five topics are: ● number and algebra ● functions ● geometry and trigonometry ● probability and statistics ● calculus Options None	<u>Written Examinations: 80%</u> <u>Paper 1 - 40%</u> Short and extended response questions (80 marks). 90 minutes, non-calculator <u>Paper 2 - 40%</u> Short and extended response questions (80 marks). 90 minutes, graphical calculator compulsory <u>Internal Assessment 20%</u> **Exploration:** Internal assessment. This is a piece of written work that involves investigating an area of mathematics. (20 marks)

Course Name: Mathematics: Applications and Interpretation SL	
This course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course also includes topics that are traditionally part of a pre-university mathematics course such as calculus and statistics. The course makes extensive use of technology to allow students to explore and construct mathematical models. Mathematics: applications and interpretation will develop mathematical thinking, often in the context of a practical problem and using technology to justify conjectures. Note: in addition to the examined course all students will follow an additional unit on vectors. This allows for full Diploma recognition by the German education authorities (Kultusministerkonferenz or KMK) so that students have full access to apply for courses at German universities.	
Content:	**Assessment:**

Core There are five topics and within these topics there are sub-topics. The five topics are: ● number and algebra ● functions ● geometry and trigonometry ● statistics and probability ● calculus Options None	<u>Written Examinations: 80%</u> <u>Paper 1 - 40%</u> Short and extended response questions (80 marks). 90 minutes, graphical calculator compulsory <u>Paper 2 - 40%</u> Short and extended response questions (80 marks). 90 minutes, graphical calculator compulsory <u>Internal Assessment 20%</u> **Exploration:** Internal assessment. This is a piece of written work that involves investigating an area of mathematics. (20 marks)

Course Name: Mathematics: High School Diploma Mathematics	
This course offers an alternative to the DP mathematics courses. It recognizes the increasing role that mathematics and technology play in a diverse range of fields. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. The course aims to offer students a study pathway based on practical everyday applications in mathematics. The course makes use of technology to allow students to explore and construct mathematical models.	
Content:	**Assessment:**
There are five topics and within these topics there are sub-topics. The five topics are: ● number and algebra ● functions ● geometry and trigonometry ● statistics and probability ● Financial mathematics	BIS Examinations: 50% Quizzes and class tests: 50%

Course Name: Mathematics: Analysis and Approaches HL	
This course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. This course includes topics that are both traditionally part of a pre-university mathematics course (for example, functions, trigonometry, calculus) as well as topics that are amenable to investigation, conjecture and proof, for instance the study of sequences and series, and proof by induction. The course allows the use of technology, as fluency in relevant mathematical software and hand-held technology is important regardless of choice of course. However, Mathematics: analysis and approaches has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. The course is very demanding and is designed for students who already have a very strong background in mathematics.	
Content:	**Assessment:**

Core There are five topics and within these topics there are sub-topics. The five topics are: ● number and algebra ● functions ● geometry and trigonometry ● probability and statistics ● calculus Options None	<u>Paper 1 - 30%</u> Short and extended response questions (110 marks). 120 minutes, non-calculator <u>Paper 2 - 30%</u> Short and extended response questions (110 marks). 120 minutes, graphical calculator compulsory <u>Paper 3 - 20%</u> Two compulsory extended response problem-solving questions (55 marks). 60 minutes, graphical calculator compulsory <u>Internal Assessment 20%</u> **Exploration:** Internal assessment. This is a piece of written work that involves investigating an area of mathematics. (20%)

Group 6: The Arts

Course Name: Visual Arts	
DP Visual Arts looks at refining existing skills and techniques as well as developing and broadening students as artists in their own right. Students must explore a range of media, experimenting to extend their ideas and skills, as well as being able to articulate the intention behind their art. The programme is designed to engage students with their own artistic journey, through creating a coherent body of works, which is supported by an investigative portfolio and an academic study of the artists that have informed their work. As students progress through the course, their independence and individual artistic style develop and this allows the student to pursue their own artistic interests. This culminates in an exhibition that is presented in the Grade 12 year, showcasing their artistic journey as shown throughout their created works. Students must also be mindful of how they display their work, as they submit a rational statement to support how their work is displayed, and through their intention statements explain to the viewer their message and intention. Higher and Standard level students follow the same assessment programme, with Higher Level expected to create more artworks and fulfill additional criteria in the Comparative Study. Although it is not a requirement to have studied Art previously it is advisable to have taken Art prior to joining the Diploma Programme.	
Content:	**Assessment:**

The programme is highly individual and is differentiated based on student interest. At the beginning of Grade 11, students will be introduced to a range of artists and art movements in order to extend their knowledge of art and it's context. From these introductory sessions, students then develop their own individual body of work. Students will acquire and practice digital (including an introduction to photoshop), 2D and 3D art-making methods.	**Exhibition (40%):** Students submit for assessment a curated coherent selection of resolved artworks for their exhibition. Selected pieces should show evidence of their highest technical accomplishment during the visual arts course and an understanding of the use of materials, ideas and practices appropriate to visual communication. Students submit a short exhibition text explaining each work and stating the title, medium, size and intention for each selected artwork. ● HL students submit a curatorial rationale that does not exceed 700 words. ● HL students submit 8-11 artworks ● SL students submit a curatorial rationale that does not exceed 400 words. ● SL students submit 4–7 artworks. **Process Portfolio (40%):** Students at SL submit carefully selected materials ('screens') which evidence their experimentation, exploration, manipulation and refinement of a variety of visual arts activities during the two-year course. The work must address a range of media from an art-making forms table provided to students. ● SL students submit 9-18 screens ● HL students submit 13-25 screens **Comparative Artist Study (20%):** Students analyse and compare different artworks by different artists. This independent critical and contextual investigation explores artworks, objects and artifacts from differing cultural contexts. Students must also submit a list of sources used. HL and SL students submit 10–15 screens which examine and compare at least three artworks, at least two of which should be by different artists. The work selected for comparison and analysis should come from contrasting contexts (local, national, international and/or intercultural). In addition to the above, HL students submit 3–5 screens which analyse the extent to which their work and practices have been influenced by the art and artists examined.

Course Name: Theatre (First assessments 2024)

The IB Diploma Theatre course at BIS gives students the opportunity to explore and enjoy the diversity of theatre throughout the world. It is designed for students with a great interest in theatre, event if they have never studied it previously. The course is broken into three core elements the students will explore in depth- Theatre in Context, Theatre Processes and Presenting Theatre. They will examine these theatrical components through the lenses of the creator, designer, director, performer and spectator. During the two years, students are expected to develop their performance skills and will have the opportunity to demonstrate their ability in plays and other public performances.
The course encourages students to develop perceptual skills through a breadth of experiences, where they will learn to recognise, speculate, analyse, empathise, metacognate and identify in relation to theatre. The development of these skills is of great value to all students and will help prepare them for later life.

Content:	**Assessment:**
Core ● Play Analysis ● Theatrical Interpretation ● Play Reading ● Collaborative Creation ● Solo Performance ● World theatre tradition research ● Theoretical study ● Acting Skill Development Structure ● Theatre in Context- Theatre in context encourages students to examine the origins (what influences a piece of theatre and the artistic choices), the impact (what the piece of theatre communicates and the impact this has on the audience) and the theory that informs each artistic choice. It aims to give students an understanding that theatre does not exist in a vacuum, that it reflects the context of the	External assessment **Task 1: Solo theatre piece** (HL only) 35%HL • Students at HL research a theatre theorist they have not previously studied, identify an aspect(s) of their theory and create and present a solo theatre piece (4–7 minutes) that demonstrates the practical application of this theory to a theatre piece for an audience. Each student submits: 1. Students will also create a report (2500 words maximum) plus all primary and secondary sources used. 2. A continuous unedited video recording of the whole solo theatre piece (4-7 minutes maximum). Internal assessment **Task 2: Production Proposal** (SL and HL) 20% HL 30% SL

theatre makers and that it is informed by theory. It develops students' ability to think about their own artistic intentions and the impact these have on others. ● Theatre Processes -Theatre processes focuses on the various processes that each of the theatre makers—creator, designer, director and performer—engages with to create, prepare and present theatre. It also focuses on the process of learning about and through theatre. It aims to give students an understanding that, although the theatre experience is holistic and collaborative, it is made up of particular discrete artistic processes and these can be recorded in different ways. ● The journal is essential for the recording of theatre and learning processes. Students should be encouraged to record their processes for each role authentically (that is, in the way that each of the specialists might record their workings) as well as being encouraged to find their own preferred way of recording their ideas, processes and learning. ● Presenting Theatre - Presenting theatre is not only about putting on a piece of theatre to an audience, although this is a key aspect of this area. It is also about how ideas about theatre and theatre making can be presented to others. The course requires students to present theatre and their ideas about theatre in different formats. It aims to give students presentation skills that can also be applied in situations beyond theatre. It develops students' presentation skills and builds their confidence as theatre makers, as learners and as presenters. Options ● Higher Level ● Standard Level	• Students at SL and HL choose a published play text they have not previously studied and formulate a vision for the design and theoretical staging of the entire play text for an audience. These ideas are presented in the form of a proposal. Each student submits: 1. Maximum of 12 pages of written text and images, with written text not exceeding 4,000 words, plus a list of all sources used. External assessment **Task 3: Research presentation** (SL and HL) 20%HL 30% SL • Students at SL and HL plan and deliver and video record an individual research presentation (15 minutes maximum) in which they provide evidence of their academic and practical exploration and learning of a world theatre tradition they have not previously studied. Each submits: 1. A video recording of the student's research presentation (15 mins maximum) 2. A list of all sources cited and any additional resources used by the student during the presentation. External assessment **Task 4: Collaborative project** (SL and HL) 25% HL 40%SL • Students at SL and HL collaboratively create and present an original piece of theatre (lasting 7–10 minutes) created from a starting point of their choice. The piece is presented to an audience as a fully-realized production. Each student submits: 1. A project report (10 pages maximum with written text not exceeding 4,000 words) plus a

	list of all sources used. 2. A video recording of the final piece. (7-10 minutes maximum)